



# ACCURATE FELT & GASKET MFG. CO., INC.

3239 SOUTH 51st AVENUE • CICERO, ILLINOIS 60804-4063

PHONE: 708-780-9000 • FAX: 708-780-9009

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## MATERIAL SPECIFICATION

### STYLE # H -1

**CORK/NEOPRENE BLEND WITH MEDIUM COMPRESSIBILITY AND GOOD OIL RESISTANCE. USED IN AIR OR REFRIGERATION COMPRESSORS AMONG OTHER APPLICATIONS.**

### GENERAL PROPERTIES

BINDER:	NEOPRENE
HARNESS (SHORE TYPE A):	55 TO 75
DENSITY:	784 Kg/m <sup>3</sup> to 1040 Kg/m <sup>3</sup>
COMPRESSIBILITY (400 psi):	23% TO 40 %
RECOVERY (400 psi):	Min 80%
TENSILE STRENGTH:	Min 1.38 M Pa
FLEXIBILITY FACTOR:	(F=5)

ASTM Oil #1, 70 H @ 100°C (212°F):  
IRM 903, 70 H @ 100°C (212°F):  
FUEL A (22 H at RT):

#### VOLUME CHANGE %

-2% to 20%  
20% to 55%  
5% to 20%

ASTM OIL #1, 70 H @ 100°C:  
IRM 903, 70 H @ 100°C:  
FUEL A (22 H at RT):  
FUEL B (22 H at RT):

#### VOLUME CHANGE %

-5% to 10%  
10% to 30%  
0% to 15%  
10% to 25%

COMPRESSION SET

METHOD A, 22h, @ 70°C 45% MAX.

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## Material Specification

**Style #: H-6 T Cork and Rubber Sponged Material With Adhesive (PSA)**

**Style #: H-7 Cork and Rubber Sponged Material**

Available in: 1/32", 1/16", 3/32", and 1/8"

Thickness tolerance: +.018, -.006, includes the adhesive system

Width Cut Tolerance

Greater than 24" +1/8", -1/8"

Up to 3" +1/32", -1/32"

### **I. General**

This specification covers a cork-sponged rubber composition that combines resilience with high surface friction. H-6 T / H-7 consists of a vulcanized material prepared from granulated cork and sponged synthetic rubber binder. The cork and rubber is intimately mixed and the compound is calendared. H-6 T / H-7 has cotton backing keyed into the undersurface to add stability. The material can be specified with (H-6 T) or without (H-7) pressure sensitive adhesive backing. This material should be stored in a relaxed and unstressed condition. The maximum temperature is 30 degree C, away from ozone forming equipment such as transformers, electric motors, etc. and away from direct sunlight. Material can be stored under these conditions up to 2 years.

### **II. Characteristics**

Rubber Type	SBR Styrene-Butadiene-Rubber, cork filled
Color	Black
Resistance to Oil/Fuel	Satisfactory
Resistance to Solvents	Good
Heat Resistance	Good
Ozone, Aging Resistance	Satisfactory
Acid/Base Resistance	Satisfactory
Gas Permeability	Good

### **III. Physical Values**

<u>Properties</u>	<u>Unit</u>	<u>Test</u>	<u>Test Values</u>
Destiny	lb/ft	ASTM F 104-88	34-45
Hardness	Shore A	ASTM D 2240-86	45-60
Tensile Strength	PSI	ASTM F 152-87 (B)	>100
Elongation	%	ASTM D 152-87 (B)	>250
Tear Resistance	lb/inch	ASTM D 624-86	>35
Compression set (24 h. RT)	%	ASTM D 395 (B)	<25
Compressibility	%	ASTM F 36-88 (F)	25-40
Compressibility	%	ASTM F 36-88 (B)	45-60
Minimum Recovery	%	ASTM F 36-88 (F)	85
Minimum Recovery	%	ASTM F 36-88 (B)	80
Volume Change	%	ASTM F 146-84, Fuel A	23-28
Volume Change	%	ASTM F 146-84, Oil #1	15-18
Volume Change	%	ASTM F 146-84, Oil #3	63-68

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## MATERIAL SPECIFICATION

**STYLE # :** H-12  
**BINDER:** Nitrile Rubber  
**CORK GRANULE SIZE:** ½ mm  
**COLOR:** Black

### Physical Properties

Test Method	Property	Result
ASTM D 2240	Hardness Shore A	60-80
ASTM F 1315	Density (kg/m <sup>3</sup> )	640-880
ASTM F 152	Tensile Strength, (min) (MPa)	1.72
ASTM F 36	Compressibility (400 psi), (%)	25-40
ASTM F 36	Recovery, (min) (%)	80
ASTM F 147	Flexibility, inicial (F=5)	No cracks

### Properties after Ageing

Test Method	Property	Results
ASTM F 147	Flexibility, Oven aged, 70h 100°C (F=16)	No cracks
	ASTM # 1, 70h 100°C (F=16)	No cracks
ASTM F 146	Volume Change after immersion (%)	
	ASTM # 1, 70h 100°C	-5 to +10
	IRM 903, 70h 100°C	-2 to +15
	Fuel A, 22h at RT	-2 to +10



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## MATERIAL SPECIFICATION

**STYLE# H-13  
ARMSTRONG NC-711**

### GENERAL PROPERTIES

TYPE	CORK AND AROMATIC FUEL RESISTANT SYNTHETIC RUBBER
COMPRESSIBILITY % AT 400 PSI	25-45 (SHEETS)
MINIMUM RECOVERY %	70% (SHEETS) 60% (ROLLS)
HARDNESS (SHORE TYPE A)	70 - 85

### VOLUME CHANGE PERCENT

ASTM OIL NO. 1 70 HOURS @ 212 °F	-15 TO +10
ASTM OIL NO. 3 70 HOURS @ 212 °F	-10 TO +15 (SHEETS) 0 TO 15 (ROLLS)
ASTM FUEL A 22 HOURS @ 70-85 °F	-10 TO +10 (SHEETS) -5 TO +10 (ROLLS)

All values are average values determined in accordance with ASTM F-104 testing methods for Type 2 material. Should not be used as basis for material specifications. Material thickness of .062" (1.6mm) used for all testing.

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## MATERIAL SPECIFICATION

**STYLE# H-23  
ARMSTRONG NC-733**

### GENERAL PROPERTIES

TYPE	CORK AND OIL RESISTANT SYNTHETIC RUBBER
COMPRESSIBILITY % AT 400 PSI	10 - 25
MINIMUM RECOVERY %	75
HARDNESS (SHORE TYPE A)	75 - 85

### VOLUME CHANGE PERCENT

ASTM FUEL A 22 HOURS @ 75 - 85 °F (21.1 - 29.5 C)	-10 to +10
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Armstrong NC-733 resilient friction material is a fully vulcanized compound of synthetic rubber and the highest quality granulated cork.

NC-733 can perform in a wide range of wet or dry friction applications when correctly used, operating successfully on jobs ranging from printer drives to heavy duty transmissions in tractors and road graders.

Originally developed for "direct-drive" plates in automotive transmissions where a smooth, non-shock engagement was essential. It is now widely used as a brake washer in automotive starters. NC-733 is also used in clutch and brake applications of washing machines, industrial air tools and industrial sewing machines.

It is recommended for applications where facing pressure is below 90 psi.

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## MATERIAL SPECIFICATION

**STYLE# H-32  
ARMSTRONG DC-205**

### GENERAL PROPERTIES

TYPE	CORK AND OIL RESISTANT SYNTHETIC RUBBER
COMPRESSIBILITY % AT 400 PSI	15-35 (SHEETS) 25-45 (ROLLS)
MINIMUM RECOVERY %	70% (SHEETS) 75% (ROLLS)
HARDNESS (SHORE TYPE A)	55 - 70

### VOLUME CHANGE PERCENT

ASTM OIL NO. 1 70 HOURS @ 212 °F	-15 TO +10
ASTM OIL NO. 3 70 HOURS @ 212 °F	15 TO 50
ASTM FUEL A 22 HOURS @ 70-85 °F	0 TO 15

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## MATERIAL SPECIFICATION

STYLE # H-33  
(DODGE #711BNF)

### GENERAL PROPERTIES

TYPE	NITRILE
HARDNESS, PTS. SHORE A	70 - 85
TENSILE STRENGTH	400 MIN.
GRADE	FIRM
FLEX	PASS 3
SPECIFIC GRAVITY	.88 - 1.04
COMPRESSION #400 PSI	15% - 25%
RECOVERY	75% MIN
COEFFICIENT OF FRICTION	DRY .6 WET .14

### APPLICATIONS

Used for direct-drive plates in automotive transmissions requiring smooth, non-shock engagements; also washing machines, industrial tools; recommended where facing pressure is below 85 psi.

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